

Claims

- [c1] A compensation circuit for a sensor generating an electrical sensor output positioned near a speaker of an audio system comprising;
an inverting circuit electrically coupled to the electrical output of the audio system, said inverting circuit generating an inverted electrical signal corresponding to a speaker audio output; and
a sensor controller coupled to the inverting circuit and said sensor, said controller generating a compensated electrical output in response to said electrical sensor output and said inverted electrical signal.
- [c2] A compensation circuit as recited in claim 1 wherein said inverting circuit comprises an operational amplifier.
- [c3] A compensation circuit as recited in claim 1 wherein said sensor comprises a pressure sensor.
- [c4] A compensation circuit as recited in claim 1 wherein said speaker comprises a subwoofer.
- [c5] A compensation circuit as recited in claim 1 wherein said inverting circuit comprises a delay circuit generating a time delay in said inverted electrical signal.
- [c6] A compensation circuit as recited in claim 1 wherein said sensor controller adds the compensated electrical output and said electrical sensor output.
- [c7] A compensation circuit as recited in claim 6 wherein said operational amplifier comprises a resistor coupled to an inverting input and an output.
- [c8] A compensation circuit comprising:
a sensor generating an electrical sensor output;
a speaker of an audio system acoustically coupled to said sensor;
an inverting circuit coupled to the electrical output of the speaker, said inverting circuit generating an inverted electrical signal corresponding to a speaker audio output; and
a sensor controller coupled to the inverting circuit and said sensor, said

controller generating a compensated electrical output in response to said electrical sensor output and said inverted electrical signal.

- [c9] A compensation circuit as recited in claim 8 wherein said sensor comprises a pressure sensor.
- [c10] A compensation circuit as recited in claim 8 wherein said speaker comprises a subwoofer.
- [c11] A compensation circuit as recited in claim 8 wherein said inverting circuit comprises a delay circuit generating a delay in said inverted electrical signal.
- [c12] A compensation circuit as recited in claim 8 wherein said inverting circuit comprises an operational amplifier.
- [c13] A compensation circuit as recited in claim 12 wherein said operational amplifier comprises a resistor coupled to an inverting input and an output.
- [c14] A compensation circuit as recited in claim 8 wherein said sensor controller adds the inverted electrical output and said electrical sensor output.
- [c15] A method for compensating for an electrical output of a sensor comprising:
generating an electrical signal at an audio system output and electrical input to a speaker;
inverting the electrical signal to form an inverted electrical signal;
generating an electrical sensor output signal altered by the acoustics of the speaker; and
combining the inverted electrical signal and sensor output signal to form a compensated electrical output.
- [c16] A method as recited in claim 15 wherein the speaker comprises a subwoofer.
- [c17] A method as recited in claim 15 further comprising generating a delay signal, wherein said inverted signal is formed in response to said delay signal.
- [c18] A method as recited in claim 15 wherein combining comprises adding the inverted electrical output and said electrical sensor output.

- [c19] A method as recited in claim 15 wherein the sensor comprises a pressure sensor.
- [c20] A method as recited in claim 15 wherein generating an electrical signal comprises generating an electrical signal corresponding to the acoustic signal of the speaker.